

Remarks

The Rejection of Claims 1-51 Under 35 U.S.C. § 103

The Examiner rejected Claims 1-51 under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 4,619,503 (*Reinheimer et al.*). Applicants respectfully traverse this rejection and request reconsideration for the following reasons.

Applicants courteously submit that the device disclosed by *Reinheimer et al.* does not include a U-shaped microscope housing having a housing attachment surface for attachment of a module thereto or a module which is removably attached to a microscope housing, wherein the module includes a base unit having a horizontal upper surface and mutually exclusive binocular and photo tubes attached to said horizontal upper surface and wherein from the position of looking into the binocular tube an unimpeded view of the specimen is permitted, as recited in Applicants' amended Claims 1 and 51.

Applicants respectfully assert that *Reinheimer et al.* disclose embodiments of a C-shaped microscope housing having a binocular viewing head attached to the housing (Figs. 1a-1c; Fig. 2); a trinocular viewing head plus a camera attached to the housing (Fig. 3); and, a binocular viewing head plus a viewing screen attached the housing (Fig. 4). Thus, Applicants courteously submit that the U-shaped microscope housing having a housing attachment surface for attachment of a module thereto and the removably attached module of the instant application are not included in the embodiments taught by *Reinheimer et al.*.

In the instant Office Action, the Examiner has asserted that *Reinheimer et al.* disclose an inverted microscope having a U-shaped microscope housing, as recited in Applicants' amended Claims 1 and 51. However, in the BACKGROUND OF THE INVENTION, *Reinheimer et al.* explicitly describe a U-shaped microscope housing:

“Also, a light microscope of inverted construction is known from the German Petit Patent DE-GM 7,628,471, which comprises a “U”-shaped basic body, where there is provided on the one “U”-arm a binocular housing, the attachment face of which is provided at the level of the object stage. A level-adjustable, tiltable, transillumination device is

provided on the other "U"-arm of the body. A lens turret is disposed between the "U"-arms and is adjustable relative to the locally fixed object stage." (*Reinheimer et al.*, Col. 1, Lines 21-31) (emphasis added).

Additionally, *Reinheimer et al.* describe drawbacks or disadvantages of the above described U-shaped microscope housing:

"The following disadvantages are associated individually or in combination with the known microscope types: ... (2) *No possibility exists for directly handling and manipulating the object to be investigated from the direction of the observer.* (3) Flange mountable or tiltable transillumination devices, or attachable incident light devices are positioned such that they are disposed either at a relatively small distance from the observer and/or to the microscopic object, which, in particular, *renders more difficult routine, long duration microscopy.* In addition, this construction can lead to undesired influencing of special biological preparations (cultures and so on) based on heat development. In some cases, the illuminating devices are attached on the side of the base part of the total apparatus directed to the observer, which results in a substantial limitation of free and ergonomically proper microscoping positions of the observer, in particular during continuous operation. *This construction is an impediment during manipulation of the object, or during the routine performance of the usual microscope operating functions.*" (*Reinheimer et al.*, Col. 1, Line 56 through Col. 2, Line 25) (emphasis added).

Subsequently, *Reinheimer et al.* distinguish their invention from the above described U-shaped microscope housing in the remaining portions of the specification. For example, the SUMMARY OF THE INVENTION states:

"This object is achieved in combined transmitted light and incident light inverted microscopes according to the invention, wherein *the stand support, the stand base and the overhanging stand arm form a "C"-shaped basic microscope body*, and wherein the free opening of the basic microscope body is directed to the observer. The fixed optical axis of the microscope passes through the condenser, the objective, the object, and passes centrally through the top-mounting stop surface of a binocular housing. *The stand support, the stand base and the overhanging stand arm form a "C"-shaped basic microscope body.* The free opening of the basic microscope body is directed to the observer. *The projection of the stand arm corresponds substantially to that of the stand base.* A side-mounting stop surface for a binocular housing is provided on the face of the stand arm directed to the observer so as to be centrally transfix by the image partial beam which passes through the stand arm.

The above object is achieved alternatively in another embodiment of an incident light inverted microscope according to the invention, wherein *the stand support, the stand base and the overhanging stand arm form a "C"-shaped basic microscope body*; wherein a free opening of the basic microscope body is directed toward the observer; wherein the projection of the stand arm is less than that of the stand base; and wherein a side-mounting stop surface for a binocular housing is provided on the front side of the stand arm such that the optical axis of the microscope, which is fixed through objective and the object, passes centrally through the binocular housing.” (*Reinheimer et al.*, Col. 2, Lines 38-68) (emphasis added).

Furthermore, *Reinheimer et al.* describe the figures in the BRIEF DESCRIPTION OF THE DRAWINGS as:

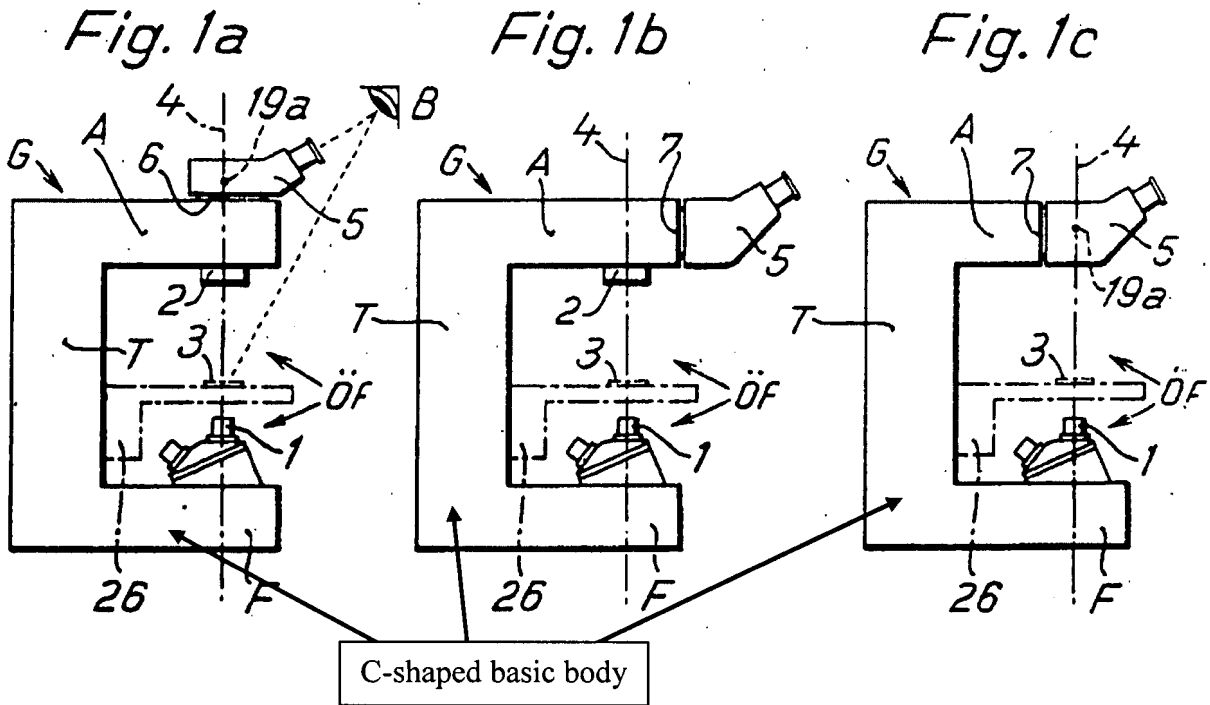
“FIG. 1a shows a mostly schematic side view of *the "C"-shaped basic body* of a combined transmitted light and/or incident light inverted microscope, wherein attached binocular housing is positioned in the vertical optical axis;

FIG. 1b shows a mostly schematic side view of *the "C"-shaped basic body* of a combined transmitted light and/or incident light inverted microscope, wherein the attached binocular housing is positioned outside of the vertical optical axis;

FIG. 1c shows a mostly schematic side view of *the "C"-shaped basic body* of an incident light inverted microscope with attached binocular housing positioned in the vertical optical axis;” (*Reinheimer et al.*, Col. 3, Lines 13-26) (emphasis added).

Similarly, in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS, *Reinheimer et al.* state that:

“*A microscope basic body G according to the invention, having the shape of a canted "C"* and comprising a stand base F, a stand support T, and a stand arm A is shown in FIG. 1” (*Reinheimer et al.*, Col. 3, Lines 47-50) (emphasis added).



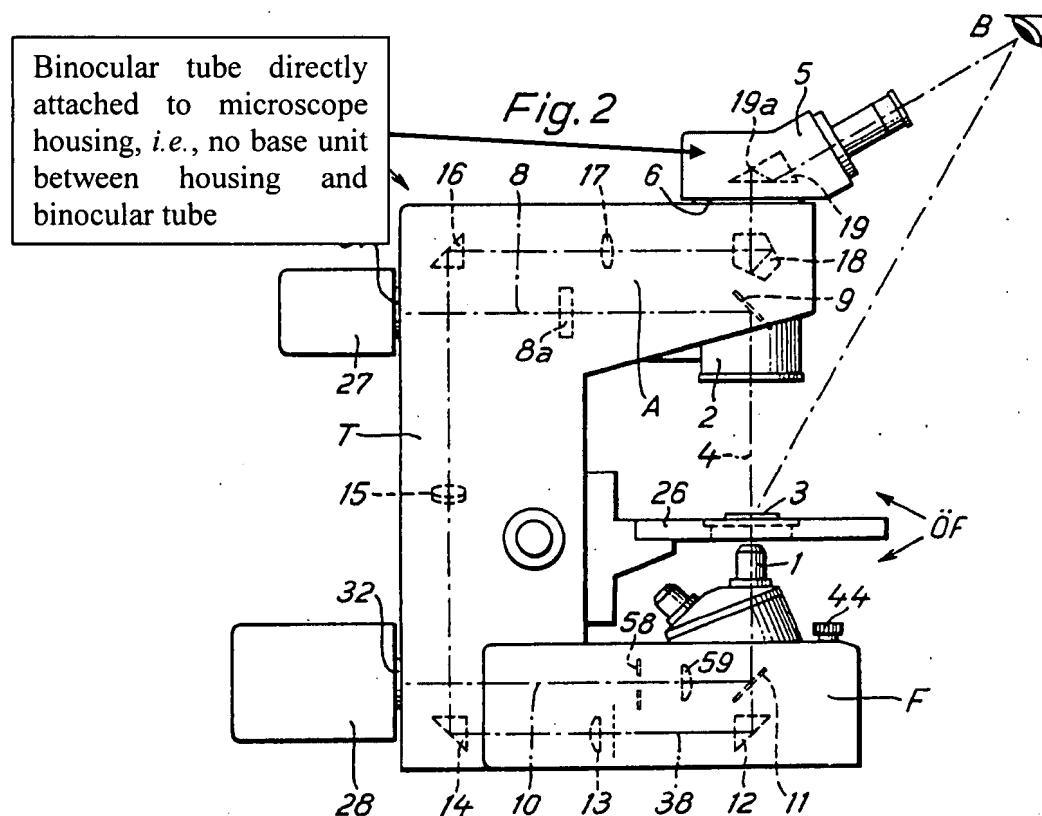
Reinheimer et al. Figs. 1a, 1b and 1c

In view of the foregoing, Applicants respectfully assert that not only do *Reinheimer et al.* fail to describe using a U-shaped microscope housing having a housing attachment surface for attachment of a module thereto as part of their invention, *i.e.*, *Reinheimer et al.* use a C-shaped microscope housing, they in fact teach away from such a design in the BACKGROUND OF THE INVENTION, *e.g.*, by describing perceived drawbacks and disadvantages of using a U-shaped microscope housing. Thus, *Reinhemer et al.* fail to teach, suggest or motivate one ordinary skill in the art to include an essential element of the claimed invention, *i.e.*, a U-shaped microscope housing having a housing attachment surface for attachment of a module thereto, and by their description of perceived disadvantages, teaches away from including this essential element.

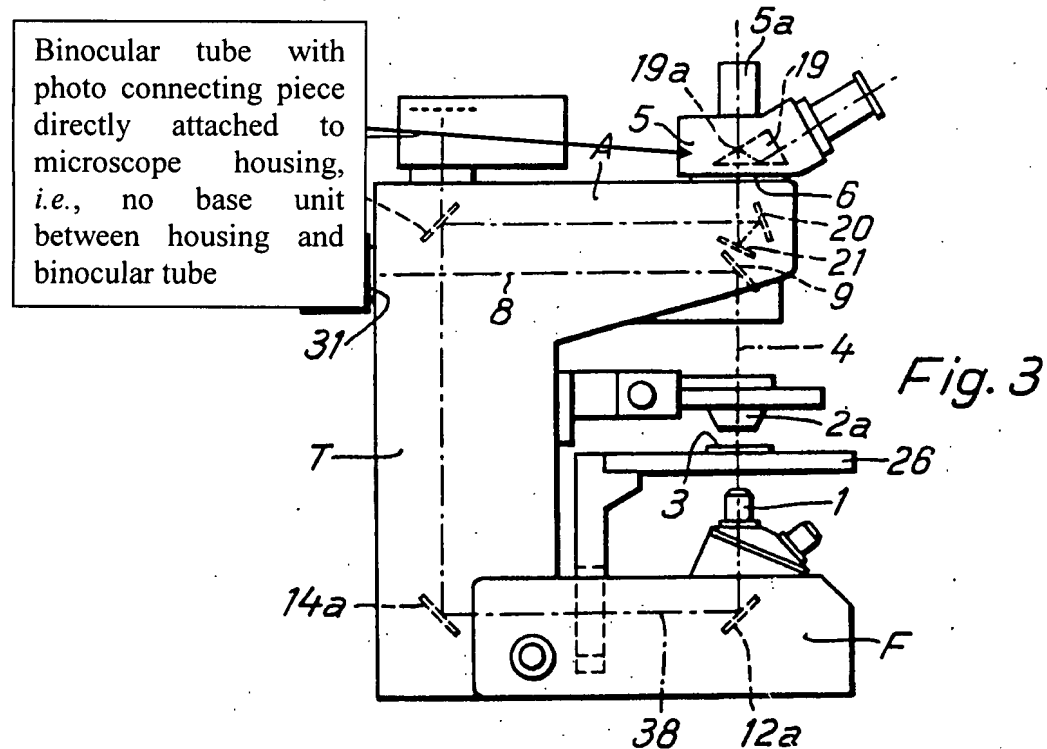
Similarly, in the instant Office Action, the Examiner has asserted that *Reinheimer et al.* disclose a module which is removably attached to a microscope housing, wherein the module includes a base unit having a horizontal upper surface and mutually exclusive binocular and

photo tubes attached to said horizontal upper surface and wherein from the position of looking into the binocular tube an unimpeded view of the specimen is permitted, as recited in Applicants' amended Claims 1 and 51. However, Applicants respectfully assert that the Examiner has failed to identify **a module** removably attached to having a microscope housing which includes a base unit having a binocular tube and a photo tube placed thereon.

Applicants courteously submit that although *Reinheimer et al.* teach a binocular viewing head (Fig. 2, Element 5) and a trinocular viewing head (Fig. 3, Element 5), they fail to teach the a base unit intermediate the viewing heads and the microscope housing, *i.e.*, the base unit recited in Applicants' amended Claims 1 and 51. Throughout the specification, *Reinheimer et al.* refer to "binocular housing 5" (*E.g.*, Col. 4, Lines 28 and 37) or "binocular housing ... provided with a photo connecting piece [5a]" (*E.g.*, Col. 5, Lines 46-47).

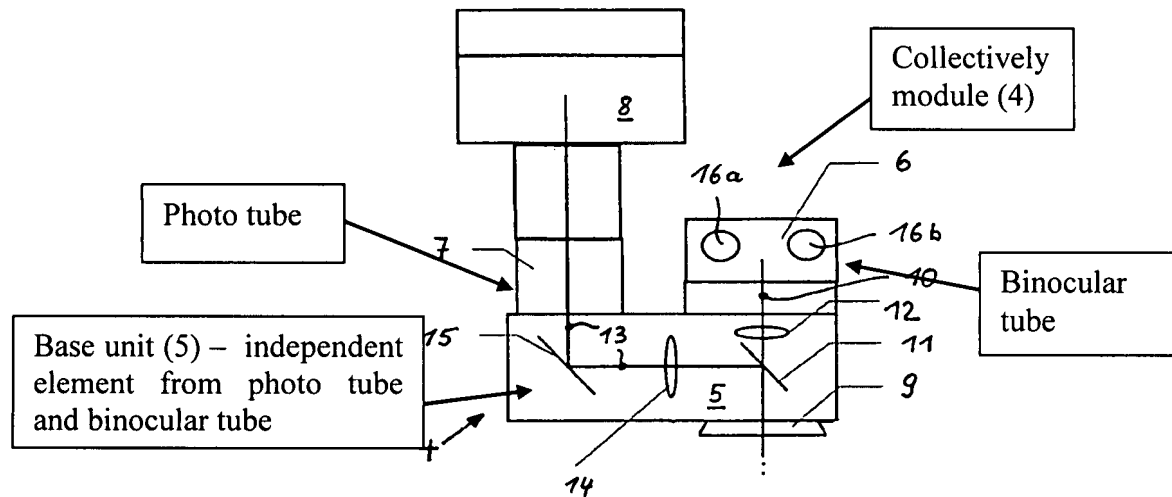


Reinheimer et al. Fig. 2



Reinheimer Fig. 3

Contrarily, Applicants' amended Claims 1 and 51 recite a module (4) comprising a horizontally protruding **base unit (5)** having a horizontal upper surface and **both a binocular tube (6) and a photo tube (7) individually attached to the horizontal upper surface**, wherein the binocular tube (6) and photo tube (7) are **mutually exclusive**. (See Figure below).



Applicants' Figure 1

Unlike the embodiments described in *Reinheimer et al.*, Applicants' amended Claims 1 and 51 recite a base unit which is an independent element of the invention, wherein the binocular and photo tubes are attached thereto and mutually exclusive, or in other words, side by side. Such an arrangement permits a user of the instant invention to merely raise her head slightly from the binocular tubes or glance laterally without any head movement to have a free and unimpeded view of the sample on the stage. This arrangement is particularly advantageous when using the instant invention as shown in Applicants' Figure 2.

In order to establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. In addition, the prior art reference (or references when combined) must teach or suggest **all the claim limitations**. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

Applicants courteously submit that in view of the foregoing, the Examiner has failed to set forth a *prima facie* case of obviousness as the disclosure of *Reinheimer et al.* and the

knowledge generally known in the art fails to teach all the elements of Applicants' amended Claims 1 and 51, and similarly, fails to teach, suggest or motive one of ordinary skill in the art to arrive at Applicants' invention as recited in amended Claims 1 and 51. More specifically, the Examiner has failed to set forth any teaching of a U-shaped microscope housing having a housing attachment surface for attachment of a module thereto or a module which is removably attached to a microscope housing, wherein the module includes a base unit having a horizontal upper surface and mutually exclusive binocular and photo tubes attached to said horizontal upper surface and wherein from the position of looking into the binocular tube an unimpeded view of the specimen is permitted, as recited in Applicants' amended Claims 1 and 51.

Hence, as Applicants' amended Claims 1 and 51 each contain at least one element that is not disclosed in *Reinheimer et al.*, i.e., a U-shaped microscope housing having a housing attachment surface for attachment of a module thereto or a module which is removably attached to a microscope housing, wherein the module includes a base unit having a horizontal upper surface and mutually exclusive binocular and photo tubes attached to said horizontal upper surface and wherein from the position of looking into the binocular tube an unimpeded view of the specimen is permitted, and as *Reinheimer et al.* do not teach, suggest or motivate one to include the missing elements, it generally follows that *Reinheimer et al.* do not render obvious Applicants' amended Claims 1 and 51. In like fashion, as Claims 2-50 contain all the limitations of the claims from which they depend, i.e., Claim 1, it follows that Claims 2-50 are also not rendered obvious by *Reinheimer et al.*.

Additionally, Applicants courteously submit that although the teachings of *Reinheimer et al.* describe being able to "alternatively view the microscopic image in the binocular 5 and view the object 3 on the microscope stage 26 without disadvantageously changing his assumed position" (Col. 4, Lines 39-42), one of ordinary skill in the art would recognize that this act is quite impossible with the arrangement of the *Reinheimer et al.* microscope. Specifically, the position of observer B shown in Figures 1a, 2 and 4 may permit viewing of the object, however one of ordinary skill in the art recognizes that an observer can not see an image through the

eyepieces of the binocular tubes from that position. In order to see an image through the binocular tubes, observer B must be quite close to the eyepieces. Applicants respectfully assert that from a position where observer B is looking into the eyepieces of *Reinheimer et al.*, the same observer B can not view the sample without changing their assumed position, *i.e.*, backing away from the eyepieces. Contrarily, the arrangement of the instant invention, as best seen in Figure 2, permits a user of the microscope to merely glance from the binocular tube eyepieces to the sample without any change to their assumed position. Thus, Applicants respectfully assert that the arrangement of the instant invention is quite different than the arrangement taught by *Reinheimer et al.*.

Regarding Claims 5 and 12-18, Applicants courteously submit that *Reinheimer et al.* fail to teach, suggest or motivate one of ordinary skill in the art to provide an arrangement where an infinity beam exists in the region of an attachment surface of the module attachment apparatus. Applicants respectfully assert that *Reinheimer et al.* are silent regarding an infinity beam, collimated light or any other teaching which would indicate an infinity beam. *Reinheimer et al.* refer to optical path 4, illuminating beam 8, incident light illuminating beam path 10 and imaging partial beam path 38; however, there is no reference to whether or not these beams or path are infinity beams, or in other words collimated light. Thus, in view of the foregoing, and in addition to the reasons set forth above regarding amended Claims 1 and 51, Claims 5 and 12-18 are further distinguished over the cited reference, as *Rienheimer et al.* fail to teach, suggest or motivate one of ordinary skill in the art to provide an arrangement where an infinity beam exists in the region of an attachment surface of the module attachment apparatus.

As the Examiner appreciates, deficiencies of cited references in teaching or suggesting all of the claim limitations cannot be remedied by general conclusions about what is “basic knowledge”, “common sense” or “desirable”. *In Re Lee*, 61 U.S.P.Q. 2d 1430 (Fed. Cir. 2002). Indeed, “to imbue one of ordinary skill in the art with knowledge of the invention ... when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used

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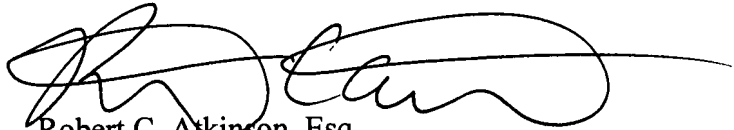
against its teacher.” *Id.*; *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 U.S.P.Q. 303 (Fed. Cir. 1983). Regarding Claims 6, 7 and 19-48, mere knowledge that periplan eyepieces provide an improved flattened field of view or that HC eyepieces may be used with photographic devices, should not be used in hindsight to infer that the disclosure of *Reinheimer et al.* could be used to arrive at Applicants’ invention as recited in Claims 6, 7 and 19-48. Applicants respectfully submit that the Examiner has failed to set forth any teaching that shows an eyepiece of a binocular tube having a degree of correction in combination with a photo tube or photo device having a different degree of correction. Thus, combining *Reinheimer et al.* with general knowledge regarding eyepieces fails to arrive at the present invention and reconsideration of the rejection of Claims 6, 7 and 19-48 is courteously solicited.

Therefore, in view of the foregoing, Applicants respectfully assert that Claims 1-51 are in condition for allowance, which action is courteously requested.

Conclusion

Applicants respectfully submit that the present application is in condition for allowance, which action is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney of record if such contact will facilitate an efficient examination and allowance of the application.

Respectfully yours,



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